

PATENT SPECIFICATION

652,189



Date of Application and filing Complete Specification: Oct. 4, 1948.

No. 25809/48.

Application made in Italy on Oct. 4, 1947.

Complete Specification Published: April 18, 1951.

Index at acceptance:—Classes 38(v), B1f1d, B2(a5a1 : c6a); 75(iii), D4r; 75(iv), B8c; and 103(ii), C9.

COMPLETE SPECIFICATION

Improvement in or relating to Rear View Mirrors for Motor Vehicles

We, FIAT Società per Azioni, a joint-stock Company organised and existing under the laws of Italy, of 300, Corso IV Novembre, Turin, Italy, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

This invention relates to rear view mirrors for motor vehicles.

It has been proposed to combine such a rear view mirror with an illuminating lamp. In one such combination the mirror and the lamp are removably mounted on a hinged support adapted to be connected to the vehicle body, and said support carries a box containing a drum on which is wound an electric cable feeding the lamp, which is partly covered by a curved guard forming a protector and lamp shade.

In the rear view mirror according to the present invention the mirror frame is secured to an orientable support serving for securing said frame to the vehicle body over the wind screen, and it carries above a casing enclosing one or more sources of light as well as a snap-action control switch therefor, the said casing being provided with a lower aperture permitting passage of light emitted by said sources and directed downwardly tangentially of the mirror.

The features and the advantages of the invention will be more clearly understood from the ensuing description and the accompanying drawing which illustrates, by way of a non-limitative example, one embodiment of the invention, and in which:

Fig. 1 is a front view of the device;

Fig. 2 is a similar view in which the upper part of the device is assumed to have been removed;

Fig. 3 is a section along the line III—III of Fig. 2;

Fig. 4 is a section along the line IV—IV of Fig. 3, and

Fig. 5 is a section along the line V—V of Fig. 1.

1 denotes the frame, which is preferably of plastic material, of the rear view mirror 2 and which is provided at the rear with a support 3 fitted with a ball joint 4 for fixing it to the body C of the motor vehicle at the top of the windscreen. The frame 1 is provided at the top with a cap 5 which is also suitably made of plastic material and which is closed by a rear wall 6. The bottom of the chamber bounded by said cap is closed by a plate of ground glass 20 at right angles to the mirror 2. Two strips 9 and 10 which act as a support for an electric light bulb 11 are fixed to the wall 6 by means of rivets 7 and 8. The strip 10 is connected by means of a plate 12 to the bolt B of the support 3 so as to form the earth connection of the bulb. A terminal 13 connected to the source of electric supply current is also fixed to the wall 6, said terminal also being used to fix a plate 14 provided with a projection 14a. The wall 6 carries a support 6a to which is pivotally connected, by a pivot 15, a metal case 16, made of brass for example, the upper part of which is embedded in a small lever 17 for actuating the switch, said lever projecting through a slot provided in the cap 5 and being provided with a wider portion 17a of complementary shape to the inside contour of said slot so as to conceal same in all the positions of the lever. The case 16 is provided at its end with a small metal ball 18, made of steel for example, which is urged outwards by the action of a spring 19 housed in the cavity of the case 16.

The device operates as follows: in the position of the lever 17 shown in continuous lines in Fig. 3, the switch is closed and current is supplied through the terminal 13, the plate 14, the small ball 18 and the strip 9 to the bulb 11 which is lighted and projects a beam of light through the ground glass 20 tangentially to the

mirror 2. When the lever 17 is moved to the position shown at 17¹, the ball 18 rolls on the plate 14 until it is stopped by the projection 14a so as to open the electric circuit and extinguish the bulb. The change from the position in which the switch is closed to that in which the switch is open and *vice versa* is effected by a snap movement produced by the pressure of the spring 19; in order to increase the snap effect the plate 14 is slightly curved towards the lever of the switch. The small ball conducts the current, but does not effect the closing and the opening of the circuit, these operations, which might damage the ball, being effected by the metal casing 16 which, in one of the positions, impinges on the strip 9, and, in the other, on the plate 14a.

The device according to the invention not only combines in one device both the rear view mirror and the lamp for illuminating the inside of the vehicle, but has the following advantages:—

a. The electric lamp is fully enclosed within a casing having a lower aperture closed by a ground glass plate which causes a beam of diffused light to be emitted, said beam being directed tangentially along the mirror without disturbing the driver;

b. The overall size of the device is substantially equal to that of an ordinary rear view mirror;

c. The arrangement of the switch directly within the casing enclosing the electric lamp affords an extremely compact construction and minimizes the length of the connecting electric wires;

d. The use of plastics for the mirror frame and casing permits inexpensive mass manufacture simply by moulding.

Having now particularly described and ascertained the nature of our said invention and in what manner the same is to be performed, we declare that what we claim is:—

1. A rear view mirror for motor vehicles in which the mirror frame has secured thereto an orientable support serving for securing it to the vehicle body, the said mirror frame carrying above a casing enclosing one or more sources of electric light as well as a snap-action control switch

therefor, and the said casing being provided with a lower aperture adapted to permit passage of light emitted by said sources and directed downwardly tangentially of the mirror.

2. A rear view mirror according to claim 1, in which the snap-action control switch comprises a lever adapted to rock about a pivot supported by the casing, said lever containing a metal case which is embedded in the plastic material forming the lever and which supports a small ball urged outwards by a spring and forming the movable contact adapted to coact in the open and closed positions of the switch with metal plates fixed to the insulating wall of the casing.

3. A rear view mirror according to claim 2, in which the small ball of the switch is adapted to roll on a current conducting base plate, said plate being of convex shape towards the ball so as to increase the snap-action effect, and in which the metal case containing the ball is adapted to stop in the closed position against a stop plate forming the stationary contact that supplies the current to the source or sources of light and in the open position against a projection of the said base plate.

4. A rear view mirror according to any of claims 1 to 3, in which the casing of the mirror frame containing the source or sources of electric light is provided with a slot through which the lever of the switch is adapted to pass, said lever being provided, inside the slot, with a widened portion adapted to conceal said slot.

5. A rear view mirror as claimed in any of claims 1 to 4, in which the lower aperture in the casing of the mirror frame is closed by a ground glass plate.

6. A rear view mirror according to any of claims 1 to 5, in which the frame of the mirror and the casing at the top of said frame are made of plastic material.

Dated this 4th day of October, 1943.

H. D. FITZPATRICK & CO.,
Chartered Patent Agents,
27, Chancery Lane, London, W.C.2.
and
94, Hope Street, Glasgow.

[This Drawing is a reproduction of the Original on a reduced scale.]

